What is claimed is:

1. An antihalation composition capable of forming a coating layer crosslinked with an overcoated photoresist layer, the antihalation composition comprising:

a resin binder, and a crosslinker compound capable of causing a thermally-activated crosslinking reaction of the resin binder.

2. The composition of claim 1 where the resin binder is a phenolic resin.

3. The composition of claim 1 where the resin binder is selected from the group consisting of a poly(vinylphenol) resin, a novolak resin, and a resin containing anthracene units.

4. The composition of claim 1 where the crosslinker compound is an amine-based material.

5. The composition of claim 1 where the crosslinker compound is selected from the group consisting of a benzoguanamine resin and a melamine resin.

6. The composition of claim 1 further comprising a compound selected from the group consisting of an acid and an acid generator compound.

7. The composition of claim 1 further comprising a thermal acid generator.

8. The composition of claim 1 comprising a silicon-containing material.

9. The composition of claim 1 further comprising a radiation absorbent dye.

10. The composition of claim 1 where the photoresist is an acid-hardening photoresist comprising a phenol-based resin binder, an amine-based crosslinker and a photoacid generator.

11. The composition of claim 1 where the antihalation composition is essentially non-photoimageable.

12. A coated substrate, comprising:

a substrate having thereon a coating layer of an antihalation composition, and a coating layer of a photoresist over the antihalation composition coating layer,

the antihalation composition coating layer comprising a resin binder and a crosslinker compound capable of causing a thermally-activated crosslinking reaction of the resin binder,

the photoresist comprising a resin binder and a radiation sensitive component.

13. The substrate of claim 12 where the antihalation composition coating layer further comprises a compound selected from the group consisting of an acid and an acid generator compound.

14. The substrate of claim 12 where the antihalation composition coating layer further comprises a thermal acid generator.

15. The substrate of claim 12 where the antihalation composition coating layer comprises a silicon-containing material.

16. The substrate of claim 12 where the antihalation coating layer further comprises a radiation absorbent dye.

17. The substrate of claim 12 where the crosslinker compound is an amine-based material.

18. The substrate of claim 12 where the crosslinker compound is selected from the group consisting of a benzoguanamine resin and a melamine resin.

19. The substrate of claim 12 where the resin binder of the antihalation composition coating layer is a phenol-based resin.

20. The substrate of claim 12 where the resin binder of the antihalation composition coating layer is selected from the group consisting of a poly(vinylphenol) resin, a novolak resin, and a resin containing anthracene units.

21. The substrate of claim 12 where the photoresist coating layer is a layer of an acid-hardening photoresist comprising a phenol-based resin binder, an amine-based crosslinker and a photoacid generator.

22. The substrate of claim 12 where the antihalation composition coating layer is at least partially thermally cured.

23. The substrate of claim 12 where the photoresist coating layer contains crosslinked portions that are the product of a photoacid-catalyzed crosslinking reaction.

24. The substrate of claim 12 where at least a portion of the antihalation composition organic coating layer is crosslinked to at least a portion of the photoresist coating layer.

25. The substrate of claim 12 where the substrate is selected from the group consisting of a microelectronic wafer and a liquid crystal display substrate.

26. A method for forming a relief image on a substrate, comprising:

applying on the substrate a layer of a antihalation composition comprising a resin binder and a crosslinker capable of causing a thermally-activated crosslinking reaction of the resin binder,

applying over said antihalation composition layer a layer of a photoresist composition comprising a resin binder and a radiation sensitive component.

27. The method of claim 26 where the crosslinker compound is an amine-based compound.

28. The method of claim 26 where the antihalation composition further comprises a thermal acid generator compound.

29. The method of claim 26 where the photoresist composition is an acid-hardening photoresist.

30. A method for treating a substrate, comprising:

(a) applying a layer of an antihalation composition on the substrate, the antihalation composition comprising a resin binder and a crosslinker compound capable of causing a thermally-activated crosslinking reaction of the resin binder;

(b) at least partially curing the antihalation composition layer;

(c) applying a layer of a photoresist composition over the antihalation composition, the photoresist composition comprising a resin binder and a radiation sensitive component;

(d) exposing the photoresist composition; and

(e) developing the exposed photoresist layer.

31. The method of claim 30 further comprising baking the exposed, resist coated substrate prior to said developing step.

32. The method of claim 30 where the antihalation composition layer is at least partially cured by heating the antihalation composition layer to a temperature sufficient to induce a crosslinking reaction between the resin binder and crosslinker compound of the antihalation composition.

33. The method of claim 30 where the antihalation composition layer further comprises a compound selected from the group consisting of an acid and an acid generator compound.

34. The method of claim 31 where said baking crosslinks portions of the antihalation composition layer to portions of the photoresist layer.

35. The method of claim 31 where the coated substrate is baked at a temperature sufficient to cause hardening of exposed portions of the photoresist composition.